

### **REMARKS**

Claims 1-27 are pending in the present application. In the Office Action mailed April 19, 2007, the Examiner rejected claims 1-2, 4-6, 11-15, and 17-19 under 35 U.S.C. §103(a) as being unpatentable over Deleryd, Mats; "On the Gap between theory and practice of process capability studies", 1998, The International Journal of Quality and Reliability Management, Bradford, Vol. 15, Iss. 2 pg. 178 (hereinafter Deleryd) in view of "A SAS Institute White Paper: The Quality Data Warehouse – serving the analytical needs of the manufacturing enterprise", © 1999, SAS Institute, pp.1-11 (hereafter SAS). The Examiner next rejected claims 3, 7, 9, 20-22, 24, 25, and 27 under 35 U.S.C. §103(a) as being unpatentable over Deleryd in view of SAS, and further in view of Davis, Robert D et al.; "Detecting Process Shifts with X-bar charts", First Quarter 1993, Production and Inventory Management Journal, 34, 1, ABI/INFORM Global, p.25 (hereafter Davis et al.). Claims 8, 10, 16, 23, and 26 were rejected under 35 U.S.C. §103(a) as being unpatentable over Deleryd in view of SAS, in view of Davis et al., and further in view of Harry, Mikel J; "Six Sigma: A breakthrough strategy for profitability", May 1998, Quality Progress, 31, 5; ABI/INFORM Global, p.60 (hereinafter Harry).

Claim 1 calls for a method for measuring product shipment process capability comprising maintaining a database that contains fields indicating at least an order, a max ship date, a customer requested date, and a product category for each order. In the rejection of claim 1 under 35 U.S.C. §103(a) as being unpatentable over Deleryd, in view of SAS, the Examiner stated that the "'customer request date' and 'max ship date' are considered non-functional descriptive material and do not further distinguish the claim." *Office Action*, 4/19/07, at pg. 3. Additionally, referring to fields indicating at least an order, a max ship date, a customer requested date, and a product category for each order, the Examiner stated, "the specific field names are considered non-functional data and do not add patentable weight to the claim." *Id.* at pg. 4. The Examiner also stated that the specifically recited data, i.e., an order, a max ship date, a customer requested date, and a product category,

are not functionally involved in the steps recited nor do they alter the recited structural elements; therefore, such differences do not effectively serve to patentably distinguish the claimed invention over the prior art. The recited method steps would be performed the same regardless of the specific data. Further, the structural elements remain the same regardless of the specific data.

*Id.* at pg. 5. Applicant respectfully disagrees. Specifically, Applicant believes that the Examiner was incorrect in characterizing the fields indicating at least an order, a max ship date, a customer

requested date, and a product category for each order, as nonfunctional descriptive material and, in turn, alleging that the limitations “do not further distinguish the claim.” *Id* at pg. 3.

Contrary to Examiner’s allegation, a customer request date and a max ship date, as claimed, are not non-functional descriptive material. “‘Nonfunctional descriptive’ material includes but is not limited to music, literary works, and a compilation or mere arrangement of data.” *MPEP §2106.01*. Alternatively, “‘functional descriptive material’ consists of data structures and computer programs which impart functionality when employed as a computer component. (The definition of ‘data structure’ is a ‘physical or logical relationship among data elements, designed to support specific data manipulation functions.’)” *MPEP §2106.01* (citation omitted). Claim 1 expresses several functional characteristics, each of which an order must possess to be employed in the method recited therein. That is, an order must have “a max ship date, a customer requested date, and a product category,” to be manipulated by the method of claim 1. Thus, these fields do carry patentable weight and claim 1 does not preempt other uses of databases in general or other types of ordering/shipping methods in general. *See MPEP §2106*.

The categorization of each specific field type is used to achieve the final step of determining a statistical calculation to indicate process quality using the shipment quality metric. For that reason, each field type cannot be considered non-functional descriptive material. These characteristics define the attributes of the data field, not the data. In contrast, the actual data in one field (e.g., a date of “7/19/07”) would be non-functional descriptive material. For instance, “fetching order information for all orders that have a **valid max ship date**” is not to fetching order information without that attribute, (e.g., fetching order information for all orders that are valid or for all orders with some other valid data). “Max ship date” further defines the claim by indicating which orders are to be fetched and is key to the proper execution of the claimed method. Additionally, claim 1 calls for determining a statistical calculation to indicate process quality using the shipment quality metric, which is provided for each order using the customer requested date and the max ship date. If fields other than the order, customer requested date, max ship date, or product category were used in the claimed steps, an unclaimed or even undesired statistical calculation may result. Therefore, it can be seen that each specific data field is functionally involved and interrelated to the steps recited.

Because of this confusion over functional and non-functional material, the Examiner has failed to properly consider all claim limitations when determining patentability under § 103(a). “Each functional limitation must be evaluated and considered, just like any other limitation of the claim, for what it fairly conveys to a person of ordinary skill in the pertinent art in the context in which it is used. A functional limitation is often used in association with an element, ingredient, or step of a process to define a particular capability or purpose that is served by the recited element, ingredient or step.” *MPEP §2173.05(g)*. Accordingly, because the Examiner did not consider all expressly recited elements of claim 1, the rejection is deficient on its face.

Regarding the prior art used to reject claim 1 under 35 U.S.C. 103(a), the Examiner stated that Deleryd teaches “subtracting the customer requested date from the max ship date producing a difference value,” and that a “process metric is subtracted from the target value T to produce a difference value.” *Office Action*, supra at pg. 2-3. The Examiner further stated that SAS disclosed “maintaining a database that contains fields indicating at least an order, a max ship date, a customer requested date, and a product category for each order,” and “fetching order information for all orders that have a valid max ship date” because “SAS teaches populating a info/data mart with ERP data” and the “ERP data includes order and shipping information.” *Id.* at 3-4. Applicant respectfully disagrees because Deleryd and SAS fail to teach or suggest the specifically recited date fields, and thus, fail to teach or suggest the steps that use these fields to ultimately produce a statistical calculation to indicate process quality using the shipment quality metric.

Deleryd discloses general process capability studies, six theoretical aspects for users of general process capability studies to consider, and information on process capability studies in practice. Deleryd, pg .2, par. 4-6 (“First, this paper describes some theoretical aspects of process capability studies . . . [t]hen the adherence to these theoretical aspects is described.”)(emphasis added). However, claim 1 calls for, “subtracting the customer requested date from the max ship date producing a difference value” and “determining a statistical calculation to indicate process quality using the shipment quality metric.” The general studies and theoretical aspects of Deleryd are not disclosed as, and cannot be considered, a “customer requested date,” a “max ship date” or a “shipment quality metric.” Furthermore, even assuming arguendo, that Deleryd teaches that “the process metric is subtracted from the target value T to produce a difference

value,” this teaching is not equivalent, nor does it suggest, “subtracting the customer requested date from the max ship date producing a difference value,” as claimed.

Moreover, claim 1 calls for “maintaining a database that contains fields indicating at least an order, a max ship date, a customer requested date, and a product category for each order and fetching order information for all orders that have a valid max ship date.” SAS does not disclose any of the claimed fields. SAS discloses using a Quality Data Warehouse to facilitate “enterprise wide quality improvement.” SAS, pg. 1, col. 1. The disclosed Quality Data Warehouse can receive data from a number of sources and provides data geared toward analysis. *Id.* (“Enterprise quality improvement requires collecting information from many departments within an organization, such as production, quality assurance, engineering, customer service, and purchasing.”) However, **none of the claimed data fields are disclosed.** Additionally, SAS does not disclose a step of fetching order information for all orders that have a **valid** max ship date. SAS does not teach or suggest any database order fetching that considers whether data is valid. Finally, despite the Examiner’s assertion, SAS does not disclose that “ERP data includes order and shipping information.” *Office Action*, supra at pg. 4. The Examiner cited pg. 8, col. 1, para. 4, which gives “Production scheduling data from MRP or ERP systems” as an example source of data for a Quality Data Warehouse. Examiner also cited pg. 2, col. 2, para. 2, which indicates that Data warehouses are being employed in some industries, such as finance, retail and manufacturing. These non-specific portions of SAS fail to disclose that “ERP data includes order and shipping information.” *Office Action*, supra at pg. 4.

Finally, Applicant disagrees with the Examiner’s taking of official notice that “it is old and well known in the art to add a numerical offset to a process metric to handle skewness (i.e. adding a predetermined number of days to the difference value).” *Office Action*, supra at pg. 3. Applicant first respectfully requests evidentiary support for the Examiner’s “Official Notice.” Applicant also notes that even if support is found for such a generalized proposition, the Examiner has not attempted to explain why it would then be obvious to, in particular, add a predetermined number of days to the difference value. It is not obvious to simply add values to process metrics without a reason to do so. For all the reasons set forth above, Applicant respectfully requests withdrawal of the rejection of claim 1 and all claims depending therefrom.

Claim 11 recites language similar to claim 1, including the steps of “query[ing] a database that contains information detailing orders, a requested delivery date, a max ship date, and a product category for a plurality of products” and “subtract[ing] the requested delivery date from the max ship date and add[ing] an adjustment value to obtain a shipment quality metric.” For the same reasons outlined above in regard to claim 1, these elements are not non-functional descriptive material and Deleryd, in view of SAS, fails to teach or suggest these limitations. Accordingly, Applicant respectfully requests withdrawal of the rejection of claim 11 and all claims depending therefrom.

Likewise, claim 17 recites language similar to claim 1 the steps of “maintain[ing] a database of data indicating an order number, a promise date, a request date, a max ship date, and a product category for each product,” and “obtain[ing] the data from each order that has a valid max ship date.” For the same reasons outlined above in regard to claim 1, these elements are not non-functional descriptive material and Deleryd, in view of SAS, fails to teach or suggest these limitations. Additionally, claim 17 recites the step of “creat[ing] an upper specification limit by adding a predetermined number of days just prior to a customer’s requested delivery date” and “creat[ing] a lower specification limit b adding a predetermined number of days after a customer’s requested delivery date.” Examiner did not address this claim limitation except through the blanket statement that “[c]laims . . . 17-19 recited similar limitations as those recited in Claims 1, 2, 4-6 above, and are therefore rejected under the same rationale.” *Office Action*, supra at pg.7. However, no limitations are found in claims 1, 2 or 4-6 that call for creating a upper or lower specification limit and SAS and Deleryd fail to teach or suggest such limitations. For these reasons, Applicant respectfully requests withdrawal of the rejection of claim 17 and all claims depending therefrom.

Finally, claim 27 recites language similar to claim 1, including the steps of “acquir[ing] a requested delivery date and a shipped date of a number of customer orders from a database” and “calculat[ing] a shipment metric mean value and standard deviation from the dates. For the same reasons outlined above in regard to claim 1, the claim 27 elements are not non-functional descriptive material and Deleryd, in view of SAS and further in view of Davis et al., fails to teach or suggest these limitations. Accordingly, Applicant respectfully requests withdrawal of the rejection of claim 27 and all claims depending therefrom.

Therefore, in light of at least the foregoing, Applicant respectfully believes that the present application is in condition for allowance. As a result, Applicant respectfully requests timely issuance of a Notice of Allowance for claims 1-27.

Applicant appreciates the Examiner's consideration of these Amendments and Remarks and cordially invites the Examiner to call the undersigned, should the Examiner consider any matters unresolved.

Respectfully submitted,

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**General Authorization and Extension of Time**

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 07-0845. Should no proper payment be enclosed herewith, as by credit card authorization being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 07-0845. If any extensions of time are needed for timely acceptance of papers submitted herewith, Applicant hereby petitions for such extensions under 37 C.F.R. §1.136 and authorizes payment of any such extensions fees to Deposit Account No. 07-0845. Please consider this a general authorization to charge any fee that is due in this case, if not otherwise timely paid, to Deposit Account No. 07-0845.

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